

What is claimed:

1. A chimeric polypeptide comprising (i) a secretion signal peptide of PhoD or LipA derived from *Bacillus subtilis* and (ii) a heterologous polypeptide.
2. The chimeric polypeptide of claim 1, wherein said heterologous polypeptide is not naturally associated with any secretion signal peptide.
3. A nucleic acid molecule comprising a first nucleotide sequence encoding a PhoD or LipA signal sequence operatively linked to a second nucleotide sequence encoding a heterologous polypeptide.
4. A recombinant expression vector comprising a first DNA sequence encoding a PhoD or LipA signal sequence operatively linked to a second DNA sequence encoding a heterologous polypeptide.
5. A host cell containing a recombinant expression vector comprising a first DNA sequence encoding a PhoD or LipA signal sequence operatively linked to a second DNA sequence encoding a heterologous polypeptide.
6. The host cell of claim 5, wherein said polypeptide is not naturally associated with a secretion signal peptide.
7. A method for producing a polypeptide, comprising culturing a host cell containing a recombinant expression vector comprising a first DNA sequence encoding a PhoD or LipA signal sequence operatively linked to a second DNA sequence encoding a heterologous polypeptide such that the heterologous polypeptide is produced by the host cell.
8. The method of claim 7, wherein the polypeptide is secreted by the host cell into a culture medium.
9. The method of claim 8, further comprising recovering the polypeptide from the culture medium.
10. A method for producing a heterologous polypeptide in bacteria comprising:

- (a) culturing bacterial cells that (i) lack a functional *TatCy* gene and (ii) contain a recombinant expression vector comprising a first DNA sequence encoding a PhoD or LipA signal sequence operatively linked to a second DNA sequence encoding a heterologous polypeptide such that the heterologous polypeptide is produced by the cells; and
- (b) recovering the heterologous polypeptide from the periplasm or the culture medium.

11. A process for producing a heterologous polypeptide in bacteria comprising:

- (a) culturing bacterial cells that (i) overexpress one or more *B. subtilis* Tat system genes encoding membrane-bound components thereof and (ii) contain a recombinant expression vector comprising a first DNA sequence encoding a PhoD or LipA signal sequence operatively linked to a second DNA sequence encoding a heterologous polypeptide such that the heterologous polypeptide is produced by the cells; and
- (b) recovering the heterologous polypeptide from the periplasm or the culture medium.